

IN THE CLAIMS:

Please amend the claims as follows:

1. (Previously amended) A device manager for providing a device driver for a device comprising:
- a device service for requesting a device;
 - a remote bus proxy for communicating with a client device;
 - a remote device driver coupled to said client device; and
 - a device manager for controlling communications between said device service and said remote device driver;
- wherein said device manager is further adapted to approve requests to read or send data to remote devices and to control accessibility to said remote devices.
- Sub E (1)*
- 1²*

Claims 2-35 (Cancelled).

36. (Previously added) The device manager of Claim 1, wherein said device manager is further adapted to discover said device service, enable said device service to use said remote devices via said remote device driver, notify other device services of an availability of said remote devices, and track a connection of said remote devices with said device service.

37. (Previously added) An apparatus for providing access to one or more remote devices over a network, comprising:

a remote device driver coupled to one or more devices;

one or more driver services configured to remotely control one or more of said devices, wherein said remote device driver tracks which of said one or more driver services communicates with which of said one or more devices; and

a device manager configured to register one or more of said driver services with said remote device driver to access one or more of said devices;

wherein said device manager is further configured to approve requests to read data from one or more of said devices, to approve requests to send data to one or more of said devices and to control accessibility to one or more of said devices.

38. (Previously added) The apparatus of Claim 37, wherein said one or more driver services and said device manager reside in a server domain coupled across a network to said remote device driver and wherein said remote device driver resides in a desktop unit domain.

39. (Previously added) The apparatus of Claim 38, wherein said desktop unit domain comprises a Human Interface Device (HID) for providing a user interface to operate said one or more devices and wherein said server domain comprises a plurality of servers for providing a plurality of computational services removed from said HID.

40. (Previously added) The apparatus of Claim 39, wherein said plurality of computational services comprise a computational power for said HID and a state maintenance for said HID.

41. (Previously added) The apparatus of Claim 39, wherein said one or more devices are locally connected to said HID.

42. (Previously added) The apparatus of Claim 41, wherein said HID can only operate said one or more devices via said one or more driver services residing in said server domain.

43. (Previously added) The apparatus of Claim 37, wherein said one or more driver services and said device manager reside in a server domain coupled across a network to said remote device driver and wherein said remote device driver resides in a Human Interface Device (HID) for providing a user interface to operate said one or more devices.

① 44. (Previously added) The apparatus of Claim 43, further comprising:
a bus device driver locally coupling said remote device driver to said one or more devices; and
a bus proxy remotely coupling said one or more driver services to said remote device driver.

45. (Previously added) The apparatus of Claim 44, wherein said one or more devices is local to said HID and wherein said HID can only operate said one or more devices via said one or more driver services.

46. (Previously added) The apparatus of Claim 44, further comprising:
a session manager configured to associate one or more sessions with one or more of said driver services; and
an authentication manager configured to associate said one or more sessions with said HID.

47. (Previously added) The apparatus of Claim 44, wherein said device manager is further configured to enforce a device access policy for registering said one or more driver services.

48. (Previously added) The apparatus of Claim 48, wherein said device manager is further configured to locate said one or more devices and to maintain an inventory of said one or more devices and respective controlling driver services.

①² 49. (Previously added) The apparatus of Claim 48, wherein said device manager is configured to notify a first driver service of a loss of a network connection to a first device when an associated session of said HID ends.

50. (Previously added) The apparatus of Claim 49, wherein said device manager is further configured to notify said remote device driver that said first driver service is no longer permitted to control said first device.

51. (Previously added) The apparatus of Claim 50, wherein said remote device driver is configured to notify said device manager of a configuration change in said one or more devices.

52. (Previously added) The apparatus of Claim 48, wherein said remote device driver comprises a filter for permitting and denying access by one or more of said driver services and wherein said filter is provided by said device manager via said network.

53. (Previously added) A method for providing access to one or more remote devices over a network, comprising:

receiving by a device manager of a device request from a driver service;
registering by said device manager of said driver service with a remote device driver; and

communicating by said driver service with a remote device via said remote device driver;

wherein said registering by said device manager of said driver service comprises controlling accessibility to said remote device, approving requests to read from said remote device, and approving requests to send data to said remote device.

54. (Previously added) The method of Claim 53, further comprising sending device configuration information by said remote device driver to said device manager.

55. (Previously added) The method of Claim 54, further comprising locally exposing said remote device to said remote device driver via a bus device driver.

56. (Currently amended) The method of Claim 55, further comprising:
associating a session with said driver service via a session manager; and
associating said session with a Human Interface Device (HID) thin-client via an authentication manager.

57. (Currently amended) The method of Claim 56, wherein said remote device is locally connected to said thin client and wherein said HID thin-client can only operate said remote device via said driver service.

58. (Previously added) The method of claim 53, wherein said registering said driver service by said device manager of said driver service further comprises enforcing a device access policy.

59. (Previously added) The method of Claim 53, further comprising maintaining in said remote device driver an association between said remote device and said driver service.

① 60. (Currently amended) The method of Claim 53, further comprising maintaining by said device manager of an inventory of devices located on a Human Interface Device (HID) thin client and respective controlling driver services for said inventoried devices.

61. (Previously added) The method of claim 53, further comprising notifying said driver service by said device manager of a loss of a network connection to said remote device.

62. (Previously added) The method of Claim 61, wherein said loss of said network connection to said remote device is in response to the closing of an associated session by a user on a thin client.

63. (Previously added) The method of claim 53, further comprising notifying said remote device driver by said device manager that said driver service is no longer permitted to control said device.

64. (Previously added) An apparatus for providing access to one or more remote devices over a network, comprising:

one or more remote devices;

a terminal locally coupled to said one or more remote devices, said terminal comprising a first processor and first memory, said first memory comprising first computer readable program code for execution by said first processor, wherein said first computer readable program code comprises a remote device driver coupled to said one or more remote devices; and

a server coupled to said terminal over a network, said server comprising a second processor and second memory, said second memory comprising second computer readable program code for execution by said second processor, wherein said second computer readable program code comprises:

one or more driver services configured to remotely control one or more of said remote devices for said terminal, wherein said remote device driver tracks which of said one or more driver services communicates with which of said one or more remote devices; and

a device manager configured to register one or more of said driver services with said remote device driver to access one or more of said remote devices;

wherein said device manager is further configured to approve requests to read data from said one or more remote devices, to approve requests to send data to said one or more remote devices, and to control accessibility to said one or more remote devices.

65. (Currently amended) The apparatus of Claim 64, further comprising a network, wherein said terminal is a Human Interface Device (HID)thin-client for providing an interface to a user, wherein said HIDthin-client is connected to said server via said network, and wherein said server provides a plurality of computational services removed from said HIDthin-client to said user.

66. (Currently amended) The apparatus of Claim 65, wherein said plurality of computational services comprise a computational power for said HIDthin-client and a state maintenance for said HIDthin-client.

67. (Currently amended) The apparatus of Claim 66, wherein said one or more driver services reside in said server and are separated from said HIDthin-client via said network.

68. (Currently amended) The apparatus of Claim 67, wherein said HIDthin-client can only operate said one or more remote devices via said one or more driver services residing in said server domain and wherein said one or more remote devices are locally connected to said HIDthin-client.

69. (Previously added) The apparatus of Claim 64, wherein said one or more driver services reside in said server and are separated from said terminal via a network and wherein said terminal can only operate said one or more remote devices via said one or more driver services residing in said server domain.

70. (Previously added) The apparatus of Claim 69, wherein said device manager is further configured to discover said one or more driver services, to enable said one or more driver services to use said one or more remote devices via said remote device driver, to notify other driver services of an availability of said one or more remote devices, and to track a connection of said one or more remote devices with said one or more driver services.